CLAIMS (T35909)

What is claimed is:

1. A method of image filtering, comprising:

(a) computing a modified auto-correlation in a first direction for each pixel in an image;

(b) filtering said image with a lowpass filter; and

(c) interpolating said image and said filtered image from step (b) wherein said interpolating at said each pixel depends upon said modified auto-correlation in a first direction.

2. The method of claim 1, further comprising:

(a) after steps (a)-(c) of claim 1 repeating steps (a)-(c) of claim 1 with said first direction replaced by a second direction, said second direction perpendicular to said first direction; and with said image of step (c) replaced by said interpolated image using said modified auto-correlation in a first direction.

3. The method of claim 1, wherein:

(a) said modified auto-correlation of step (a) of claim 1 is $R_{xx}(1)/(R_{xx}(0) + \delta)$ where $R_{xx}(.)$ is the auto-correlation function for the pixel values in an interval about said each pixel and with the DC component removed, and where δ is a parameter.

4. The method of claim 3, wherein:

(a) said interpolating of step (c) of claim 1 depends upon the amount $R_{xx}(1)/(R_{xx}(0) + \delta)$ of claim 3 exceeds a threshold.

5. The method of claim 1, wherein:

(a) said image is a color channel of a color image.